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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,641	11/10/2003	Knut Magne Risvik	5598/74US	4785

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EXAMINER

LY, CHEYNE D

ART UNIT	PAPER NUMBER
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2168

DATE MAILED: 05/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/705,641	Applicant(s) RISVIK ET AL.	
	Examiner Cheyne D. Ly	Art Unit 2168	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-11 and 13-19 is/are allowed.
- 6) ☒ Claim(s) 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicants' arguments filed February 15, 2006 have been fully considered but they are not deemed to be persuasive. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.
2. The addition of new claims 17-19 has been acknowledged.
3. Claims 1-19 are examined on the merits.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kenneth Baclawski (U.S. Patent No. 5,694,593 and Baclawski hereafter) in view of Masashi Tsuchida (U.S. Patent Application Publication No. 2001/0011268 and Tsuchida hereafter) and further view of Srikanth Avadhanam (U.S. Patent No. US006778977B1 and Avadhanam hereafter).

7. This rejection is maintained with respect to claim 12, as recited in the previous office action mailed November 07, 2005.

Regarding Claim No. 12, Baclawski discloses:

all search nodes in any one of the columns including substantially the same sub-indexes of information please see (Col 3, Lines 33-36, see also Col 4. Lines 8-14), all search nodes in any one of the rows including distinct sub-indexes of information (Col 3, Lines 27-29, see also Col 2, Lines 8-1 1).

Baclawski's reference discloses all of the claimed subject matter set forth above, except it does not explicitly indicate search nodes logically arranged in a plurality of columns and plurality of rows.

However, Tsuchida teaches search nodes logically arranged in a plurality of columns and plurality of rows (Paragraphs [0057] and [0062]).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Baclawski with the teachings of Tsuchida to include the feature of logically arranged the search nodes in a plurality of columns and plurality of rows in order to increase the query processing speed, please see Tsuchida, (Abstract).

The combination of both Baclawski and Tsuchida discloses all the claimed

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subject matter set forth above, except they fail to explicitly indicate:

the search nodes in the rows being logically divided into at least a first and a second tier;
the search nodes in the first tier including sub-index for a first portion of the database, the search nodes in the second tier including an index for a second portion of the database, and
wherein the data in the first and second tier is based on respective rankings of the information in the first and second portion of the database.

However, Avadhanam discloses.

the search nodes in the rows being logically divided into at least a first and a second tier (Col 1, Lines 16-25, see also Col 4, Lines 58-67),
the search nodes in the first and second tiers including sub-index (Abstract etc.) for a first and a second portion of the database respectively (Col 18, Lines 25-37, see also Col 20, Lines 12-17), and
wherein the data in the first and second tier is based on respective rankings of the information in the first and second portion of the database (Figure No. 8, Element No. 814 and corresponding text).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of both Baclawski and Tsuchida with the teachings of Avadhanam by dividing the nodes into first and second tiers as further indexing based on the tiers would lead to smaller search area that the search engine

system needs to locate information, which in turn increases the response time of the system.

RESPONSE TO ARGUMENTS

8. On page 8, Applicant argues that claim 12 has been amended to incorporate elements of allowable claim 14; therefore, said claim has overcome the prior art rejection of record. Applicant's argument is not persuasive because the amendment merely incorporates the limitation of "sub-index" from said claim, but not claim 14 in its entirety. As for the amended limitation of "sub-index," Avadhanam describes a "system for creating an index for a database table of records...each processing unit independently creates a sub-index, i.e., different processing units create at least two sub-indexes" (Abstract etc.).

Allowable Subject Matter

9. Regarding Claims 1-11 and 13-19, Applicant's particular search engine wherein storing a first and a second sub-indexes in a first and a second plurality of search nodes respectively and wherein both the first and the second search nodes are logically arranged in a first and a second plurality of columns respectively in combination with the other limitations of the claims, was not disclosed by, would not have been obvious over, nor would have been fairly suggested by the prior art of record or that encountered in searching of the prior art, the prior art fails to anticipate or render Applicant's limitations above obvious.

CONCLUSION

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

11. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

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13. For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199. The USPTO's official fax number is 571-272-8300.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. Dune Ly, whose telephone number is (571) 272-0716. The examiner can normally be reached on Monday-Friday from 8 A.M. to 4 P.M.

15. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Vo, can be reached on (571) 272-3642.

C. Dune Ly */CDE*
Patent Examiner
5/5/06



TIM VO
PRIMARY EXAMINER